This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

19. (Currently Amended) A method of mitigating corrosion of a metal seed layer on the surface of recessed features caused by contact of said metal seed layer with an electroplating solution, the metal seed layer being formed at least in part from copper, said method comprising cathodically polarizing said metal seed layer with respect to said solution prior to or less than approximately 5 seconds following contact of said metal seed layer with said solution.

20. (Canceled)

21. (Previously Presented) A method of mitigating corrosion as in claim 19 wherein said cathodic polarization of said metal seed layer is performed by causing a dc cathodic current to flow between said metal seed layer and a counter electrode.

22. (Previously Presented) A method of mitigating corrosion as in Claim 21 wherein said dc cathodic current has a current density in the range from approximately 0.1 milliamperes per square centimeter to approximately 5 milliamperes per square centimeter.

23. (Currently Amended) A method of mitigating corrosion as in Claim 19 wherein said cathodic polarization of said metal seed layer is performed by applying a net cathodic voltage to said metal seed layer with respect to a copper reference electrode in the electroplating solution prior to said metal seed layer contacting said electroplating solution.

24. (Original) A method of mitigating corrosion as in Claim 23 wherein said voltage is approximately
-10 millivolts with respect to said reference copper electrode in said electroplating solution.

25. (Currently Amended) A method of electroplating a metal onto a surface comprising a field region and a plurality of recessed features having relatively higher and lower aspect ratios, the surface having a metal seed layer, the method comprising:

contacting said surface with an electroplating solution comprising metal ions and an additive under conditions wherein the metal seed layer is cathodically polarize with respect to the electroplating solution prior to or less than approximately 5 seconds following said contacting;

applying a dc cathodic current through said surface, the dc cathodic current [being] having a first current density that is sufficiently small that depletion of metal ions and the additive is absent at both the field region and the recessed features, to create a substantially conformal thin conductive metal film on said surface;

contacting said thin conductive metal film on said surface with said electroplating solution for a time sufficient for adsorption of said additive onto said thin conductive metal film;

applying a dc cathodic current having a second value of current density through said surface, the second value such that electroplating occurs preferentially on bottoms of recessed features having the least diffusion-accessibility;

increasing said current density from said second value to a third value such that electroplating progresses to bottoms of features having higher diffusion-accessibility, until the aspect ratios of all of said recessed features are less than approximately 0.5; and

further increasing said current density to a ~~third~~ fourth value providing a condition of conformal plating, filling said recessed features.

26-28. (Canceled)

29. (Original) A method of electroplating as in Claim 25 wherein said metal ions comprise copper ions.

30. (Original) A method of electroplating as in Claim 29 wherein said conformal thin conductive metal film on said surface has a thickness of about 500 Angstroms or less.

31. (Original) A method of electroplating as in Claim 29 wherein said first current density is in the range from approximately 0. 1 milliamperes per square centimeter to approximately 5 milliamperes per square centimeter.

32. (Original) A method of electroplating as in Claim 31 wherein cathodic current pulses are superimposed on said first current density.

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33. (Original) A method of electroplating as in Claim 29 wherein said second value of current density is up to about 5 milliamperes per square centimeter and increasing said current density from said second value is increasing said current density over a period of from about 3 to about 60 seconds to a maximum current density of from about 4 to about 45 milliamperes per square centimeter.

34. (Currently Amended) A method of electroplating as in Claim 29 wherein said ~~third~~ fourth value of current density is from about 15 to about 75 milliamperes per square centimeter.

35. (Original) A method of electroplating as in Claim 25 wherein said additive comprises at least one chemical species that suppresses electroplating when adsorbed on said surface.

36. (Previously Presented) A method of electroplating a void free copper layer onto a surface comprising a field region and a plurality of recessed features, the recessed features having a range of aspect ratios, the surface having a metal seed layer, the method comprising: immersing said surface into an electroplating solution comprising copper ions, a suppressing additive, and an accelerating additive under conditions wherein an initial dc cathodic current density of from about 0.1 to about 5 milliamperes per square centimeter is applied to said surface to prevent dissolution of the seed layer; maintaining said initial dc cathodic current density through said surface to create a substantially conformal conductive copper film having a thickness of about 500 Angstroms or less on said surface; increasing said current density from said initial value to a second value wherein suppressing additives are preferentially depleted at the bottoms of recessed features having the highest aspect ratios such that electroplating deposition occurs preferentially on said bottoms, and maintaining the current density at said second value until said recessed features are filled to the extent that the aspect ratios of all of said recessed features are less than approximately 0.5; and further increasing said current density to a third value providing a condition of rapid conformal plating, completely filling said recessed features and depositing a copper layer on said filled recessed features and said field region.

37. (Previously Presented) The method of Claim 36 wherein said second value of current density is from about 4 to about 45 milliamperes per centimeter squared and said third value of current density is from about 15 to about 75 milliamperes per centimeter squared.

38. (Original) The method of Claim 36 wherein said metal seed layer is a metal seed layer formed by a physical vapor deposition process.

39. (Previously Presented) The method of Claim 36 wherein the range of aspect ratios is from about 0.02 to about 5.5.

40. (New) The method of claim 19, wherein the metal seed layer is formed by a vapor deposition process.